FUTURE FISHERIES IMPROVEMENT PROGRAM

SUPPLEMENTAL INFORMATION SHEET FOR WATER LEASING OR WATER SALVAGE PROJECTS

1. Please complete the following table describing the water right(s) associated with the proposed project.

RIGHT NUMBER; WATER SOURCE	POINT OF DIVERSION	QUANTIFIED FLOW (CFS)/ VOLUME (AF)/ IRRIGATED ACRES	PRIORITY DATE; PERIOD OF USE	RELATIVE PRIORITY ON WATER SOURCE	PURPOSE OF WATER RIGHT	OTHER CLAIMED ON THE STREAM SENIOR TO YOUR LISTED CLAIMS
76F-098260; Sauerkraut Creek	5 points of diversion. Two diversion points in Sec.5 and three in sec. 32 of T19N; R9W	15.0 cfs 180 acre feet per annum 75 irrigated acres	6/1/1913; April 20th through September 15th	4th in priority of 15 water rights	Irrigation	A 1.11 cfs mining water right is senior to water right 98260. Plus two water rights for stock water drinking directly from source.

The water right being modified and subject to partial instream flow conversion is **76F 98260**, highlighted in the table 2 below. The right is held by Sunny Slope Grazing Association and is the fourth right in priority for this drainage. Two of the three rights senior to 76F 98260 are for stock water drinking directly from the stream and are also held by Sunny Slope Grazing Association.

Volumes of water diverted are not quantified in the Water Court Adjudication proceedings although estimates were requested at the time of filing. Claimant, in 1982, asserted that the volume diverted was 180 acre feet. However, this estimate appears low based on interviews with irrigator, land owner, and observations of irrigation scheduling.

Table 1 - Priority Date Index - Sorted by Date of First Use

Basin ID	Water Right #	Source Name	Name	# Diver-sions	Priority Date Year	Month	Day	Purpose of Use	Flow Rate	Units	Acres Irri-gated
76F	215759	Sauerkraut Creek	Armstrong	1	1880	3	1	Mining	1.11	CFS	
76F	98264	Sauerkraut Creek	Sunny Slope Grazing Assn Inc	2	1889	11	1	Stock			
76F	98268	Spring. U. T. of Sauerkraut Creek	Sunny Slope Grazing Assn Inc	1	1889	11	1	Stock			
76F	98260	Sauerkraut Creek	Sunny Slope Grazing Assn Inc	5	1913	7	1	Irrigation	15	CFS	75
76F	108119	Sauerkraut Creek	Norman	1	1917	5	10	Fire protection	2.5	CFS	
76F	108116	Sauerkraut Creek	Norman	1	1917	5	10	Fish and wildlife	2.5	CFS	
76F	108114	Sauerkraut Creek	Norman	1	1917	5	10	Irrigation	340	GPM	20

Basin ID	Water Right #	Source Name	Name	# Diver -sions	Priority Date Year	Month	Day	Purpose of Use	Flow Rate	Units	Acres Irri- gated
76F	108118	Sauerkraut Creek	Norman	1	1917	5	10	Mining	2.5	CFS	
76F	108113	Sauerkraut Creek	Norman	1	1917	5	10	Multiple domestic	2.5	CFS	2
76F	108117	Sauerkraut Creek	Norman	1	1917	5	10	Recreation	2.5	CFS	
76F	108115	Sauerkraut Creek	Norman	1	1917	5	10	Stock			
76F	51926	Sauerkraut Creek	USA (Forest Service)	1	1928	6	1	Stock			
76F	51931	Sauerkraut Creek	USA (Forest Service)	1	1928	6	1	Stock			
76F	132455	Sauerkraut Creek	Saunders	1	1958	10	18	Mining	2.67	CFS	
76F	116164	U. T. Of Sauerkraut Creek	Sunny Slope Grazing Assn Inc	1	1971	5	15	Stock			

Montana's general stream adjudication process is now active in the Blackfoot drainage. The deadline for objecting to water right claims in the basin recent ended. At this point, it appears no objections have been filed against claim no. **76F 98260.**

The Montana Fish Wildlife and Parks has objected to all three mining water rights, the fire protection right, the 20-acre irrigation water right, the recreation water right, fish and wildlife water right, fire protection water right and the 2 acres of lawn and garden irrigation under the multiple-domestic water right.

2. In the last 10 years, has your full water right amount regularly been available at your point of diversion throughout your period of use?

Assuming that "period of use" refers to the permissible period of use identified in the claim abstract, the answer is no. Like most streams in western Montana, Sauerkraut Creek is a perennial stream heavily dependent on snowpack, with its highest flows in spring and early summer. During the early summer the full 15 cfs of the water right is available; later in the summer, while less than 15.0 cfs is physically available in the stream, the irrigation system is capable of capturing whatever flow is in the stream.

While there is a limited record of flow measurement on this creek, in 2009, flow records were collected from mid-May through early July. Those records indicted flows as low as 1.64 cfs. It is important, however, to note that there are three tributary streams that contribute flow to Sauerkraut Creek below this stage recording site. All three contribute significant flows during runoff. Two are perennial and provide additional flows throughout the summer. Summer season flows of these intervening tributaries add up to an additional 1.0 cfs. There are also ground water contributions from two small mining dredge sites approximately .5 mile down gradient from the recorder site.

Finally, July flows recorded in 2009 may have been lower than the mean July flows. A peak discharge of 71.5 was recorded on May 19th. As displayed in the graph below runoff declines rapidly in this system. By June 24, 2009 stream flows had declined to 3.22 cfs. By July 9th flows at this point declined to 1.64 cfs. Stewart Schwartz, the principal in Sunny

Slope Grazing Association corroborates the tendency of this stream to display an earlier runoff than the river's main stem as well as the significant reduction in flow later in the season. Annual discharge values collect that the USGS Gage, Blackfoot River near Bonner, gage 12340000, the 2009 water year ranked as the 49th driest of 75 years of record. Annual discharge in the Blackfoot drainage was slightly greater than average. But based on comparisons to the Blackfoot of Bonner USGS gage the 2009 late summer flows, were likely lower than average. The 2009 Sauerkraut measured and graphed discharge likely represents a hydrograph with an earlier than normal runoff, a peak discharge slightly lower than normal with then a early runoff decline into base flows and a lower than average base flow.

Have you ever made "a call" on junior water users to obtain the water you needed (through a water commissioner or otherwise)?

No. While there are 14 water rights on this stream enforcement actions have not developed. The stock water uses do not have a mechanical diversion and are limited to stock drinking from the stream. The fire protection, recreation, and fish / wildlife claimed uses also have no diversion. The multiple-domestic use is water diverted via a bucket for two cabins. The mining claims have either never been perfected or have not been in use for an extended period.

3. **Please describe or include a summary of any measurements of the amount of water you have regularly diverted and how much typically flows by your diversion during different time periods.**

Like many water systems on non-controversial Montana streams, this irrigation system currently does not have functional head gates or diversion structures. Temporary dams are used for diversion. Daily water measurements or water diversion records have not been collected.

On June 19, 2010, MTFWP personnel took flow measurements in the two main Sunnyslope irrigation ditches. Flows in the ditch immediately below diversion #4, (NW NE NW SE sec 32) were 14.5 cfs. Flow in the ditch immediately below diversion #1 (NE NW SE NW section 5) was 4.8 cfs. Both ditches were near, but not at, full capacity.

4. **Has your local FWP fish biologist confirmed that you're leasing/salvage project addresses a stream flow problem that significantly limits the fishery?**

Yes**.** Under current operations, the irrigator frequently diverts all of the available stream flow. Irrigation system improvements will limit diversions, improve conveyance and increase application efficiency. Improvements to the irrigation system will limit appropriations to less than 5 cfs. Additionally, upon the advice of Ron Pierce of MTFWP, parties to this conservation project have all stipulated that a base flow of 3 cfs will be retained in Sauerkraut Creek at all times to provide for both resident habitat and passage for migratory fish. The parties have not yet defined exact details of the instream flow transaction that will be used to implement the 3.0 cfs flow trigger.

5. **How much actual water (often different than just the remainder of your water rights) will be added to the stream through completion of your project?**
   The following estimates of water protected as instream flow below the point of diversions are based upon the 2009 hydrograph, a maximum diversion intake of 5 cfs and an absolute minimum instream flow requirement of 3 cfs.

April 20 – May 1	3 cfs	
May 1 – June 1	10 cfs	
June 1 – June 15	5 cfs	
June 30 - September 15	3 cfs	(In low water years all available flows up to 3 cfs.)

What length of stream will benefit from this additional flow? (Note: Under certain circumstances, senior water can be protected legally from diversion by downstream junior users.)
Approximately seven miles. The full water right can be protected from the headwaters to the historic point of diversions, a distance of approximately 5 miles. The re-watered stream reach, 1.9 miles, extends down-stream from the upper most diversion and ends with the confluence of Sauerkraut Creek and the Blackfoot River. Instream flow provides habitat and connectivity.

6. **Is there a water commissioner on your stream?**

No. Formal water right administration has historically not been necessary on this stream.

Are you willing to actively assist in monitoring and/or protecting the conserved water instream? Yes / No (Please circle one and describe)

Yes. Water measurement devices, one on the diversion and one in the stream below the diversion will be established. The diversion device is to be an inline flow meter. The stream monitoring will use a staff gage and rated section. A second staff gage and rated section will be placed near the mouth of Sauerkraut Creek.